

Appln No.: 10/524,122  
Amendment Dated: September 19, 2006  
Reply to Office Action of June 20, 2006

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (currently amended) A stairlift comprising including a stairlift rail; a carriage mounted on said rail for movement there along; a chair ~~pivotal~~ mounted on said carriage; ~~and~~ over-speed braking means operable to brake said carriage from further movement on said rail when the speed of said carriage on said rail exceeds a pre-determined maximum speed, and said stairlift being characterised in that angle determining means for determining are provided to determine out-of-level positions of said chair, said angle determining means being capable of causing actuation of said over-speed braking means.
2. (currently amended) A stairlift as claimed in claim 1 wherein said over-speed braking means comprises includes speed sensing means operable to sense, electronically, the speed of said carriage along said rail.
3. (currently amended) A stairlift as claimed in claim 2 wherein said speed sensing means comprises includes a roller in rolling contact with said rail; and means to determine the speed of rotation of said roller.
4. (currently amended) A stairlift as claimed in claim 3 wherein said speed sensing means comprises includes at least one magnet which rotates with said roller; and a pick up operable to generate an electromagnetic signal from the passage of said magnet thereby, said pick-up providing a speed output signal representative of the speed of rotation of said roller.
5. (currently amended) A stairlift as claimed in claim ~~4~~ 3 wherein, in the event of said speed output signal indicating a speed in excess of ~~the~~ a pre-determined maximum carriage speed, said over-speed braking means triggers a solenoid to engage said over-speed braking means with said roller and, thereby, cause a braking member to engage with said rail.
6. (currently amended) A stairlift as claimed in claim 1 wherein said over-speed braking means is provided, in part, by a microprocessor, said microprocessor being programmed constructed and arranged to receive a ~~said~~ speed output signal and, in response to said speed output signal indicating a speed in excess of said pre-determined carriage speed, to generate a command to trigger a ~~said~~ solenoid to engage said over-speed braking means.
7. (currently amended) A stairlift as claimed in claim 6 wherein said microprocessor is further programmed constructed and arranged to receive a signal from said angle determining means

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and, in response to said angle determining means indicating a chair angle in excess of a predetermined angle from the horizontal, to generate a command to trigger said solenoid.

8. (currently amended) Control means for a stairlift, said stairlift comprising including: a stairlift rail having rail sections which, when installed, are arranged at different angles to a horizontal plane; a carriage mounted on said rail for movement there along; a chair pivotaly mounted on said carriage; braking means operable to brake said carriage with respect to said rail; speed sensing means operable to sense the speed of said carriage along said rail; and angle sensing means operable to sense positions of said chair at which the angle thereof with respect to said horizontal plane is at or in excess of a limit; said control means including a microprocessor operable to receive signals from said speed sensing means and from said angle sensing means, and to generate a command to operate said braking means in response to said speed sensing means sensing a carriage speed in excess of a predetermined maximum, or said angle sensing means sensing a chair angle in excess of a predetermined maximum.

9. (currently amended) A method of controlling a stairlift, said stairlift comprising including: a stairlift rail having rail sections which, when installed, are arranged at different angles to a horizontal plane; a carriage mounted on said rail for movement there along; a chair pivotaly mounted on said carriage; braking means operable to brake said carriage with respect to said rail; speed sensing means operable to sense the speed of said carriage along said rail; and angle sensing means operable to sense positions of said chair at which the angle thereof with respect to said horizontal plane is at or in excess of a limit; said method comprising the steps of including monitoring the speed of said carriage along said rail and monitoring the angle of said chair with respect to the horizontal and, in the event either said speed or said angle depart from predetermined limits, causing said braking means to be operated.

10. (currently amended) A method of testing the operation of an over-speed governor included within a stairlift carriage, said governor acting in combination with electronic speed sensing means and a governor actuation circuit, said method comprising the steps of including simulating an electrical signal indicative of carriage speed, applying said signal to said governor actuation circuit and observing a response of said governor.

11. (currently amended) A stairlift carriage for movement along a stairlift rail, said carriage comprising including; a drive motor operable to drive said carriage along said rail; an over-speed governor operable to brake said carriage with respect to said rail; limit engagement means operable independently of said over-speed governor and positioned to engage mechanical limit stops at each end of said rail, wherein said carriage being characterized in that said over-speed governor and said limit engagement means ~~are constructed and arranged to~~ actuate a common isolation switch thereby cutting power to said drive motor.

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12. (currently amended) A carriage as claimed in claim 11 wherein said limit engagement means ~~is further constructed and arranged to convey~~ a charging current from said rail to a battery located within said carriage.

13. (currently amended) An electronics based over-speed governor for braking a stairlift carriage with respect to a stairlift rail, said governor comprising ~~including~~: electronic speed sensing means operable to sense the speed of said carriage along said rail; a braking member included within said carriage and displaceable into contact with said rail; and a solenoid actuated in response to an over-speed state being sensed by said speed sensing means to cause displacement of said braking member, wherein ~~said governor being characterized in that~~, when said carriage is stationary, said solenoid may be energised and de-energised without causing displacement of said braking member.

14. (currently amended) A stairlift carriage comprising ~~including~~ the over-speed governor as claimed in claim 13, wherein said solenoid is energised and de-energised each time power is respectively supplied to or removed from, said carriage.

15-19 (Canceled)

20. (new) A stairlift as claimed in claim 5, wherein said solenoid is energised and de-energised each time power is respectively supplied to or removed from, said carriage.